FLIGHT SUMMARY REPORT

Flight Number: 97-006-07

Calendar/Julian Date: 22 June 1997 • 173

Sensor Package: Wild-Heerbrugg RC-30

Area(s) Covered: Mojave

Investigator(s): Stine, USGS

Aircraft #: 798
Department of Energy
B200 King Air

SENSOR DATA

Accession #:	05206	05207
Sensor ID #:	017	017
Sensor Type:	RC-30	RC-30
Focal Length:	6” 152.75 mm	6” 152.75 mm
Film Type:	Aerochrome MS 2448	Aerochrome MS 2448 II
Filtration:	HF3 + 2.2 AV	HF3 + 2.2 AV
Spectral Band:	420-700 nm	420-700 nm
f Stop:	Variable	Variable
Shutter Speed:	Variable	Variable
# of Frames:	375	416
% Overlap:	60	60
Quality:	Excellent	Excellent

Remarks:

Airborne Science and Applications Program

The Airborne Science Branch at NASA's Dryden Flight Research Center, Edwards, California, operates two ER-2 high altitude aircraft in support of NASA earth science research. The ER-2s are used as readily deployable high altitude sensor platforms to collect remote sensing and in situ data on earth resources, celestial phenomena, atmospheric dynamics, and oceanic processes. Additionally, these aircraft are used for electronic sensor research and development and satellite investigative support.

The ER-2s are flown from various deployment sites in support of scientific research sponsored by NASA and other federal, state, university, and industry investigators. Data are collected from deployment sites in Kansas, Texas, Virginia, Florida, and Alaska. Cooperative international scientific projects have deployed the aircraft to sites in Great Britain, Australia, Chile, and Norway.

Photographic and digital imaging sensors are flown aboard the ER-2s in support of research objectives defined by the sponsoring investigators. High resolution mapping cameras and digital multispectral imaging sensors are utilized in a variety of configurations in the ER-2s' four pressurized experiment compartments. The following provides a description of the digital multispectral sensor(s) and camera(s) used for data collection during this flight.

Department of Energy Remote Sensing Laboratory

The NASA Airborne Science and Applications Program at Ames Research Center contracted with the Department of Energy Remote Sensing Laboratory (RSL) in Las Vegas, Nevada to fly the RSL Multispectral Scanner (MSS) and the NASA Thermal Infrared Multispectral Scanner (TIMS) over the desert southwest. The scanners were flown on the DOE Cessna Citation.

The Cessna Citation is a low and medium altitude, moderate speed aircraft. It can operate from 4,000 to 35,000 feet above sea level at speeds between 135 and 225 knots. There are two instrument ports in the aircraft. The RSL 1268 Multispectral Scanner was mounted over the aft port and the NASA Thermal Infrared Multispectral Scanner was mounted over the forward port.

Camera Systems

Various camera systems and films are used for photographic data collection. Film types include high definition color infrared, natural color, and black and white emulsions. Available photographic systems are as follows:

- Wild-Heerbrugg RC-10/RC-30 metric mapping camera
  - 9 x 9 inch film format
  - 6 inch focal length lens provides area coverage of 16 x 16 nautical miles from 65,000 feet
  - 12 inch focal length lens provides area coverage of 8 x 8 nautical miles from 65,000 feet

- Hycon HR-732 large scale mapping camera
  - 9 x 18 inch film format

- 24 inch focal length lens provides area coverage of 4 x 8 nautical miles from 65,000 feet

- IRIS II Panoramic camera
  - 4.5 x 34.7 inch film format
  - 24 inch focal length lens
  - 90 degree field of view provides area coverage of 2 x 21.4 nautical miles from 65,000 feet

The U.S. Geological Survey's EROS Data Center at Sioux Falls, South Dakota serves as the archive and product distribution facility for NASA-Ames aircraft acquired photographic and digital imagery. For information regarding photography and digital data (including areas of coverage, products, and product costs) contact EROS Data Center, Customer Services, Sioux Falls, South Dakota 57198 (Telephone: 605-594-6151).

Information on data tape format, logical record format, and scanner calibration data may be obtained from the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: 650-604-6252).

CAMERA FLIGHT LINE DATA
FLIGHT NO. 97-006-07

Accession # 05206

Sensor # 017

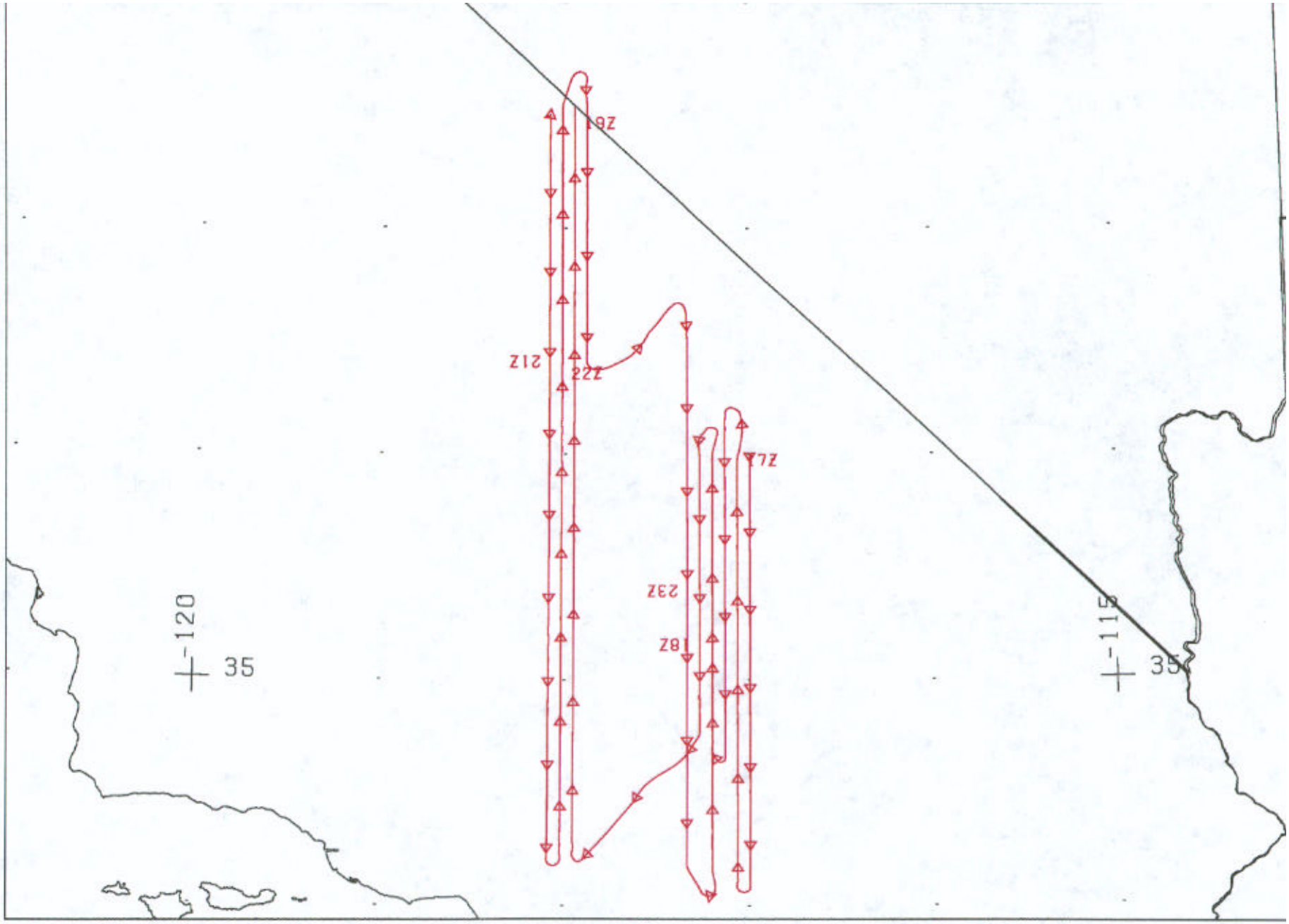
Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MGL feet/meters	Cloud Cover/Remarks
700	11	1	0042-0095	16:07:42	16:31:12	21850/6660	Clear
700	12	1	0096-0158	16:38:13	16:59:35	21865/6664	Clear
700	13	1	0159-0207	17:06:44	17:24:50	21820/6651	Clear
700	14	1	0208-0248	17:29:07	17:43:18	21800/6645	Clear
700	15	1	0249-0295	17:49:09	18:05:52	21785/6640	Clear
700	25	1	0296-0416	18:20:14	19:00:54	21795/6643	Clear

CAMERA FLIGHT LINE DATA
FLIGHT NO. 97-006-07

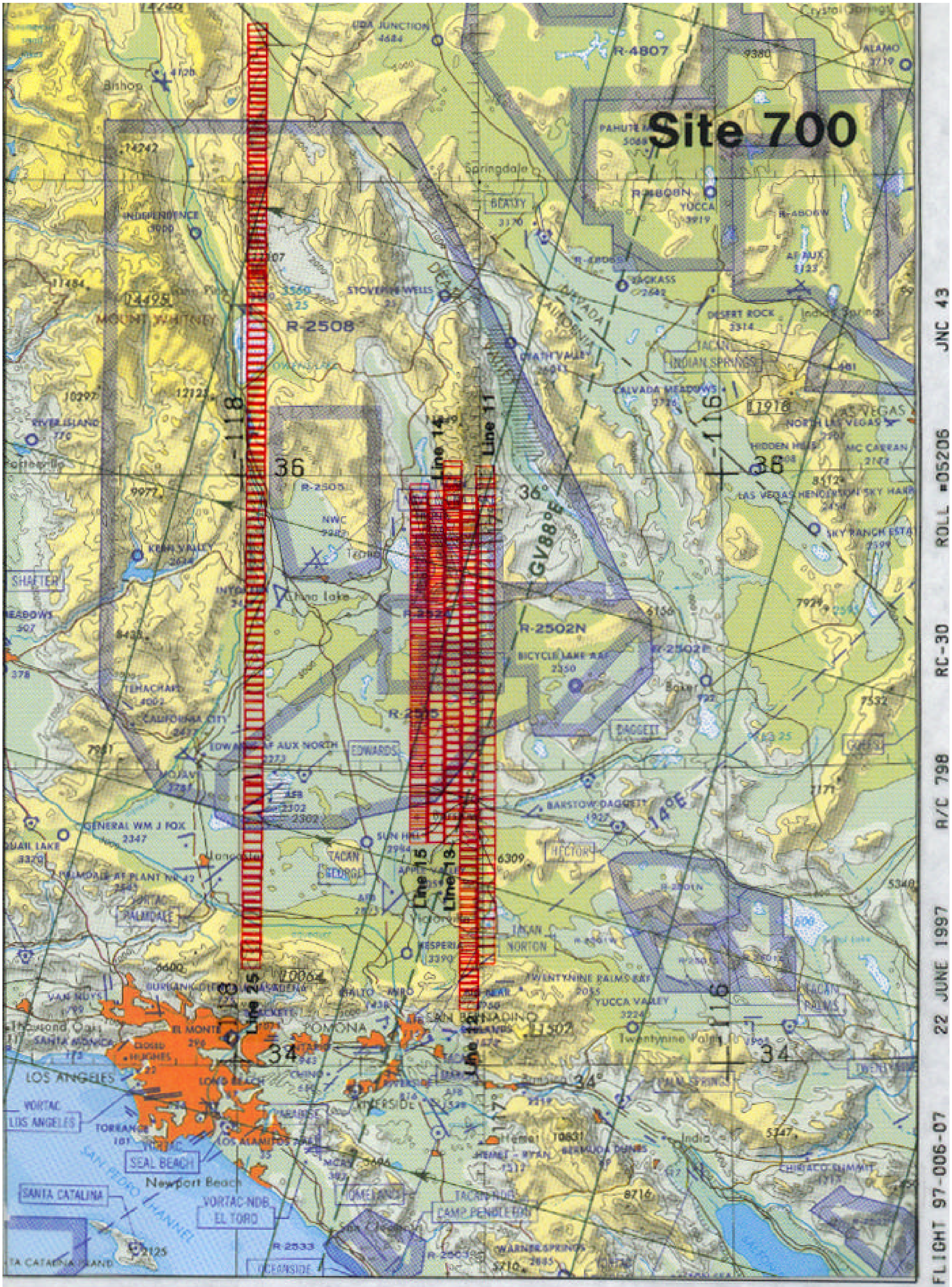
Accession # 05207

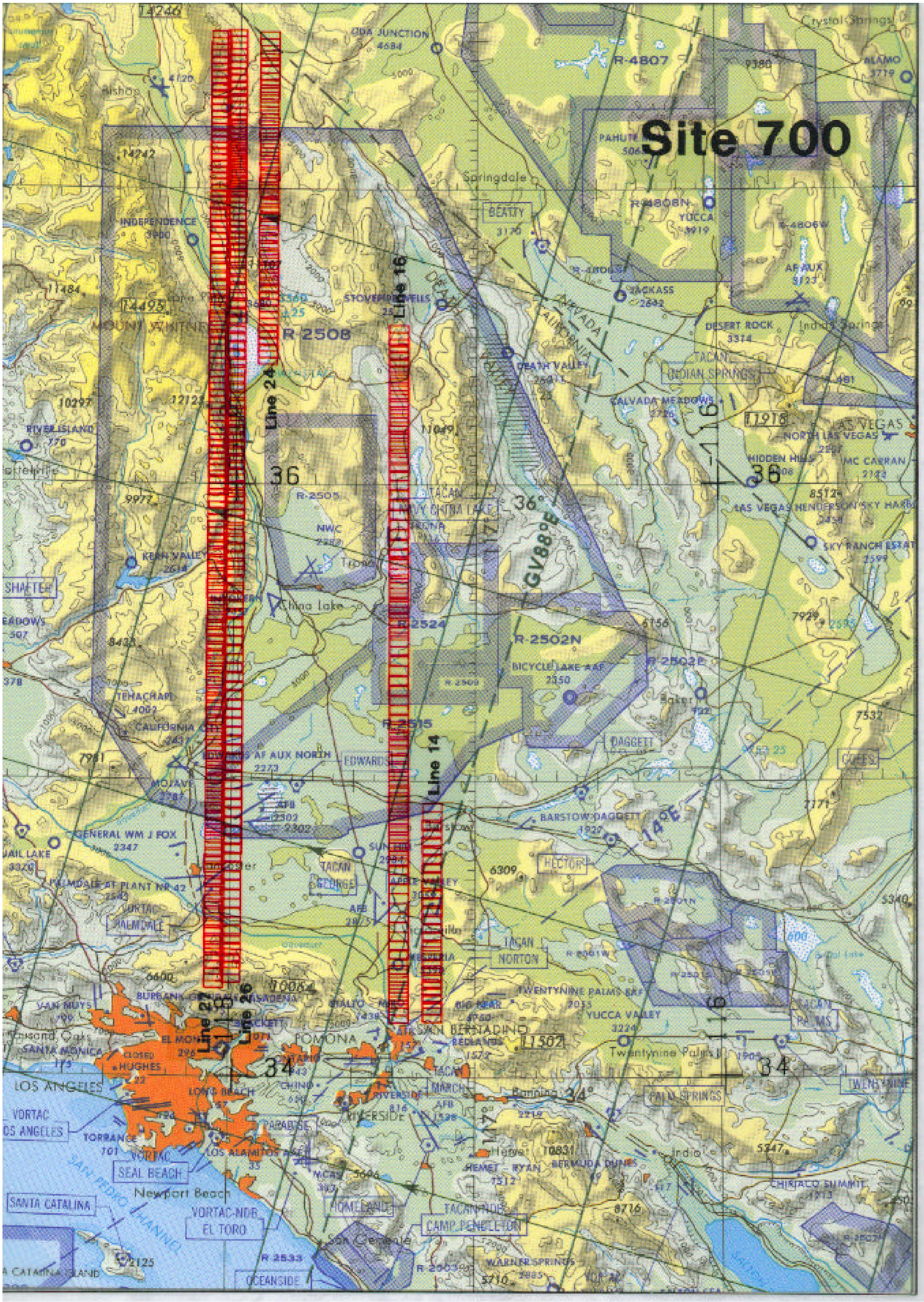
Sensor # 017

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MGL feet/meters	Cloud Cover/Remarks
700	27	1	0001-0137	20:44:46	21:28:38	21808/6647	Clear
700	26	1	0138-0261	21:33:25	22:15:27	21798/6644	Clear
700	24	1	0262-0306	22:21:01	22:35:32	21764/6634	Clear
700	16	1	0307-0390	22:45:17	23:16:26	21749/6629	Clear
700	14	1	0391-0416	23:21:35	23:30:20	21869/6666	Clear



FLIGHT 97-006-07 22 JUNE 1997 A/C 798 RC-30


Site 700
Line 25
Line 15
Line 18
Line 14
Line 11
R-2508
R-2502N
FLIGHT 97-006-07 22 JUNE 1997 A/C 798 RC-30 ROLL #05206 JNC 43



FLIGHT 97-006-07 22 JUNE 1997 A/C 798 RC-30 ROLL #05207 JNC 43